DB12 Direct Feed

DB8 Gravity Discharge

RUGGED, RELIABLE, ALL-PURPOSE CONVEYING

Conair's DustBeater vacuum material loaders provide flexibility in meeting the varying demands of conveying pelletized and re-grind materials to a hopper, bin or processing machine.

The DB8 is ideal for lower-volume conveying up to 200 lbs/hr.

The DB12 provides a larger loader body, filter and vacuum motor for higher-volume conveying, up to 1000 lbs/hr.

BRUSHLESS MOTOR OPTION FOR DB12

Conair's DustBeater series, the most reliable loader line, is now even better with the new Easy Loading Control (ELC) and improved options to meet your demanding material transfer needs. The unit provides powerful conveying, is easy to set-up and simple to maintain. The latest generation offers an optional brushless motor for long motor life with no brush maintenance (DB12).

The optional ControlMate pendant allows you to load regrind along with virgin material, purge the conveying line, adjust blowback pulses and load and hold. Built-in security levels allow easy parameter viewing of simple day-to-day settings, yet secure the critical settings.

A choice of loader configuration allows direct loading to machine throats or hopper loading to bins and hoppers.

- **Convey up to 1000 lbs/hr**
  A DB12 equipped with the 1.3 Hp brushless vacuum motor will convey up to 1,000 lbs/hr.
- **Durable, powder-coated steel construction**
  This unit comes standard in carbon steel and is available in optional stainless steel.
- **Choice of discharges**
  Select gravity discharge for hopper loading or direct feed to deliver materials straight to the machine throat.
- **Easy maintenance**
  Plug-in connections, tool-less entry and a drop-in filter make this unit easy to maintain.
- **Full-featured control**
  The Easy Loading Control (ELC) and optional ControlMate pendant govern all aspects of your DustBeater Loader including: load time, material demand, purge, ratio, and many other loading parameters.

CONAIR

DUSTBEATER DB8 AND DB12 MODELS

HOW IT WORKS

Loading Control

The ELC-M displays a loader's sequence within its conveying cycle with icons and associated LEDs. The control has precise, reliable electronics for operation, programming and alarms.

A signal from the loader's demand switch indicates to the ELC-M on the loader that it requires material to be conveyed to satisfy its demand. The ELC-M sends a signal to the vacuum motor on the loader to energize and start a loading cycle. The material is then drawn in by the loader's vacuum motor. If the hopper is filled, the demand switch will remain open (Fig. 1) and no further load cycles will be needed. However, if the demand was not satisfied and the demand switch closes (Fig. 2) the loader will continue with loading cycles until the demand is satisfied.

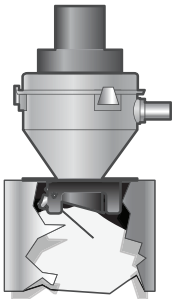


Fig. 1

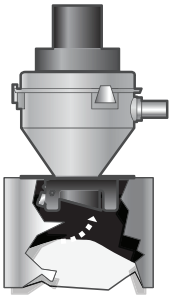
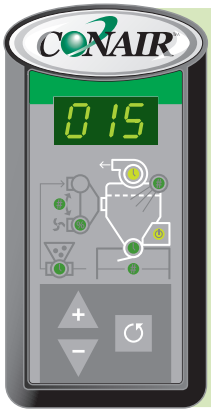


Fig. 2

CONTROLMATE™ PENDANT (OPTIONAL)



ELC ControlMate™ Pendant

The ControlMate pendant consists of eight LEDs, a three-digit numeric display and three push buttons.

The ControlMate comes with an ethernet cable that supplies power and communications to the pendant from the main ELC control.

ControlMate User Level 1 Parameters

- On/Off
- Load Attempts
- Ratio Percentage
- Load Time
- Unload Time
- Ratio Layers
- Purge Time
- Blowback

- **Interchangeable programming -** One optional pendant can be used to control all ELC controls within your system.The ControlMate pendant can be used with either the ELC-M or ELC-16.
- **Change up to 16 parameters -** Eight standard control parameters are accessible through User Level 1. An additional eight parameters are accessed through User Level 2. These additional parameters activate loading options such as: priority demand, fill sensor logic, demand sensor logic, fill sensor present, load and hold, purge/ Adjustable Purge Valve (APV) installed, ratio installed, blow back installed.
- **Easy-to-read display -** Both the ControlMate pendant and the ELC control use icons and associated LEDs to symbolize various loading parameters.

DISCHARGE VALVE CONFIGURATION

The gravity discharge valve uses a non-contact, magnetic reed switch to signal loader demand. Stand-offs provide a rugged guard to prevent discharge damage. The huge opening eliminates material bridging.

A positive discharge air-operated discharge valve is also available.

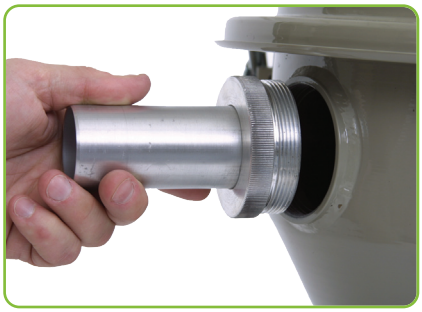
DIRECT FEED CONFIGURATION

Mount directly to a machine throat with a direct feed glass hopper (3 sizes available). An air-tight seal at the throat is required, or an isolator valve may be included. Quick-disconnect clamps allow easy loader removal for thorough cleaning. A simple grate magnet may also be included in the cast base for catching tramp metal.

DUSTBEATER DB8 AND DB12 MODELS

FEATURES

TUBING CONNECTIONS



DustBeaters are built for a lifetime of service, so common wear components are designed for easy replacement. Tubing stubs are threaded and may be easily replaced in the event of damage, extreme wear or even for changing line sizes.

EASY LOADING CONTROL (ELC)

Individually mounted Easy Loading Controls (ELC) operate the loader's vacuum pump when it receives a signal from the demand switch to start a conveying cycle.

EASY FILTER CLEAN/CHANGE

The lid may be easily removed from the loader with no tools. The reinforced dacron disc filter simply drops into place. All connections are quick-disconnect for fast maintenance and easy service.

OPTIONS

A Broad Choice of Options Stretch the Value of your DustBeater Purchase

Brushless Motor

No maintenance. Longer life. Higher throughput. These new motors incorporate technology that transforms the incoming power into fast acting magnetic pulses that interact with the motor armature to create rotation faster than ever possible with traditional brush architecture. Provides near-frictionless motor performance, similar to, but far exceeding the performance of traditional three-phase motors. (DB12 only).

Sound Shield

The sound shield option bolts into place easily with no loader modification. This is a very effective option for both the new brushless as well as traditional brush motors.

Volume Fill Sensor

Provides automatic shut-off of the loader's vacuum sequence when the loader is full. An alarm message is displayed on the control if not satisfied during the vacuum sequence.

Ratio Valve

Dual inlet, single outlet material valve allows the loading of a second material (usually regrind) in approximate, layered percentages along with virgin material. May be installed on loader inlet or remotely. See the Ratio Valve specification sheet for more information.

Wear Plates

T-1 tool steel plates, installed inside the loader body, radically reduce hopper wear when conveying highly abrasive materials like glass-filled compounds. Wear plates may be easily replaced, if needed.

Magnets

An airtight, Drawer Magnet may be added below any direct feed DustBeater to trap ferrous metal. Or, a low cost Grate Magnet may be inserted directly into the glass hopper of the direct feed receiver to save head room.

Stainless Steel Material Contact

Provides stainless steel in place of carbon steel. The 304 grade stainless steel is uncoated internally (in material contact areas), but powder coated externally for optimum cosmetic appearance.

Remote Demand Sensor

To trigger the operation of the loader (demand) from a location other than directly below the loader, a remote demand sensor may be used. Useful on oversized drying hoppers to sense through a window (6 foot cable provided) or when off-loading a granulator (30 foot cable provided). Extension cables are also available.

Positive Discharge Valve

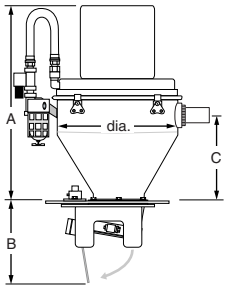
Provides a pneumatically driven discharge valve on the bottom of the loader in the event that gravity will not sufficiently open the standard flapper after loading. Useful for very light materials or when high CFM drying hoppers are being loaded. (DB12 only).

DUSTBEATER DB8 AND DB12 MODELS

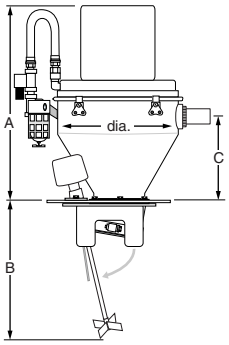
SPECIFICATIONS

HOPPER LOADING

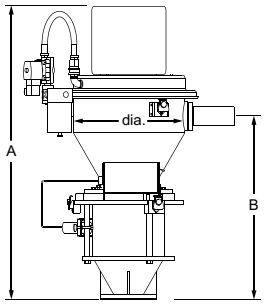
GRAVITY DISCHARGE



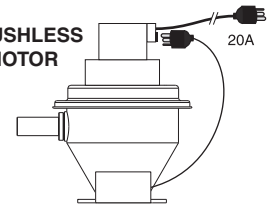
POSITIVE DISCHARGE (DB12 ONLY)



DIRECT FEED



BRUSHLESS MOTOR



The high performance Brushless Motor plugs directly into a 120 volt, 20 amp receptacle. The control may then plug into the motor for convenience, if desired.

Loaders with brush motors operate through the control.

DB Series Self-contained Vacuum Loaders

Loader model	DB8	DB12	DB12*
Vacuum motor	**5/8 Hp-2 brush**	**7/8 Hp-4 brush**	**1.3 Hp brushless**
Maximum injection mold machine size	500 tons	1000 tons	2000 tons
Maximum extruder size inches {mm}	2 {50.8}	3 {76.2}	4 {101.6}
Recommended throughput† lbs/hr {kg/hr}	200 {91}	500 {227}	1000 {454}
Maximum conveying distance ft {m}	50 {15.24}	75 {22.86}	120 {36.58}
Loader diameter inches {mm}	8 {203}	12 {304}	
Loader volume ft³ {liters}	0.14 {4.0}	0.5 {14.2}	
Material/Vacuum line size inches {mm} OD	1.75 {44.45} OD		
Available voltages, 50/60 Hz	120/220 VAC	120/220 VAC	120 VAC
Amps @ 120 VAC	8	14	17
Amps @ 220 VAC	4	7	NA
Compressed air requirements	80 psi {5.52 bar}, 2 ft³/min {0.057 m³/min}, NPT fitting: 3/8 in.		
Filter area in² {cm²}	50 {322.6}	113 {729}	
Filter type	Reinforced polyester disc		

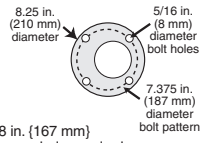
Hopper Loading Configuration

Loader model	DB8	DB12
Dimensions inches {mm}		
A - Height above mounting plate‡	16 {406}	22 {559}
B - Depth below mounting plate	5.5 {140}	9 {229}
with positive discharge	NA	16 {406}
C - Height to center of material inlet	6.2 {157.5}	9.5 {241}
Mounting details	See FIG. 1	See FIG. 2
Installed weight lb {kg}	27 {12}	49 {22}
Shipping weight lb {kg}	50 {23}	65 {29}

Direct Feed Configuration

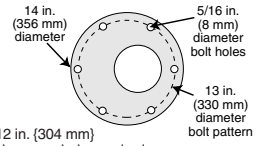
Loader model	DB8			DB12		
Viewing chamber model	**4 lb**	**15 lb**	**25 lb**	**4 lb**	**15 lb**	**25 lb**
Viewing chamber capacity lb {kg}§	4 {1.81}	15 {6.8}	25 {11.3}	4 {1.81}	15 {6.8}	25 {11.3}
with isolator valve‡	3 {1.36}	11 {4.99}	21 {9.53}	3 {1.36}	11 {4.99}	21 {9.53}
Dimensions inches {mm}						
A - Height above mounting plate‡	27.8 {706.1}	33.3 {845.8}	83.8 {2129}	33.8 {858.5}	39.3 {998.2}	89.8 {2281}
B - Height to center of material inlet	18 {457.2}	23.5 {596.9}	74 {1880}	21.3 {541}	26.8 {680.7}	77.3 {1963}
Add for isolator valve	0	0	0	2.25 {57}	2.25 {57}	2.25 {57}
Mounting details	See FIG. 3					
Installed weight lb {kg}	52 {24}	54 {25}	85 {39}	74 {33}	76 {34}	107 {48}
Shipping weight lb {kg}	80 {36}	84 {38}	117 {53}	108 {49}	110 {50}	145 {66}

FIG. 1 – DB8



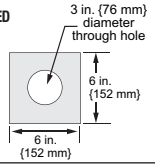
6-5/8 in. {167 mm} clearance hole required

FIG. 2 –DB12



12 in. {304 mm} clearance hole required

FIG. 3 – DIRECT FEED



SPECIFICATION NOTES

* Available with brushless motor as standard.

† Throughputs beyond the recommended ratings should not be attempted unless you are conveying virgin material from close distances. Higher throughputs could result in shortened brush and/or filter life. For higher throughputs, consult Conair for a quote on central vacuum loaders.

‡ Add 3 inches {76.2 mm} to height if using sound shield option.

§ At 35 lbs. per ft³. {15.88 kg}

All DustBeaters are shipped with 10 ft. {3.048 m} of flex hose and a vertical feed tube.

Specifications can change without notice. Contact your Conair representative for the most current information.